E-Poster

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Effects of Combining Mirror Therapy and Conventional Therapy on Motor and Timed Functional Ability of the Upper Extremity among Chronic Stroke: A Randomized Controlled Trial

Topic: Exercise

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BACKGROUND

Stroke is prominent reason for death and disability. Upper limb involvement presents a significant challenge for activities of daily living (ADL). Mirror Therapy (MT) and Conventional physical therapy (CPT) techniques were beneficial for motor and function of upper limb. However, limited evidence of the combined effects of CPT and MT in the Saudi stroke population. Thus, we assessed the combined effects of MT and CPT in improving the motor and timed functional ability of the upper extremity among chronic stroke patients in Saudi Arabia.

METHODS

This was a multi-centered randomized control trial, which was utilized after receiving the Institutional ethical committee approvals and registration on clinicaltrails.gov (ID NCT06698380). The inclusion criteria were duration of stroke of more than six months, subjects of chronic stroke with left or right hemiplegia, while the exclusion criteria were unable to follow visual or oral commands, unilateral neglect, cognitive impairments, language deficits, any other neurological disorders and recent surgeries. The study outcomes were Fugal-Meyer Assessment Upper Extremity (FMA-UE) and Wolf Motor Function Test (WMFT), which were utilized two times (pre-intervention and after six weeks at the end of the intervention). There were two groups: The CPT (Control group) and the MT combined with CPT treatment (experimental group).

RESULTS

This study involved 38 participants. The majority of participants were male (68.4%), with ischemic strokes being the most prevalent type (73.7%). The participants' average age was 54.97 ± 7.11 years and body mass index (BMI) was 28.71 ± 6.19 kg/m^2. Wilcoxon Signed Ranks Test showed statistically significant improvement in WMFS-T scores ($z = -3.41$, $p < 0.001$) with a mean difference of 25.79 in the experimental group, while the control group also showed improvement ($z = -2.81$, $p < 0.05$) with a mean difference of 13.21. The FMA-UE scores also showed statistically significant differences in the experimental group ($z = -2.82$, $p < 0.001$) and the control group ($z = -3.83$, $p < 0.001$). The mean difference in the experimental group was 28.32 and in the control group 10.68.

CONCLUSION

Our findings suggest improvements in the function of the non-paretic upper limb. Our results indicate that engaging in 45-minute sessions of combined CPT and MT (three days a week for six weeks) significantly improves motor and functional ability of the paretic upper limb compared to CPT alone for stroke survivors.

Statement of Disclosures

None

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